

REMARKS

This Amendment and Response to Office Action is submitted in response to the outstanding Office Action mailed November 12, 2003. Claims 1-13, 15-24, and 26-33 are pending in the above-referenced application. The Examiner rejected all of the pending claims under 35 U.S.C. §103(a).

Applicants appreciate the telephone interviews courteously granted by the Examiner on January 20, 2004 and February 9, 2004. In the interviews, claims 1, 15, and 26 were discussed, with reference to U.S. Patent Nos. 6,454,298 to Hardig and 6,336,651 to Mramor (hereinafter "Hardig" and "Mramor," respectively). Applicants proposed to amend claim 1 to recite that the first stiffening element reduces flexure of the inflatable portion and increases uniformity of cushion inflation, to amend claim 15 to recite that the first stiffening element reduces flexure, and to amend claim 26 to recite that the first stiffening element is stitched to the inflatable portion. The Examiner indicated that the language selected by Applicants was too functional to define over the cited art. Applicants added structure to the claims, and the Examiner again indicated that the claims do not define over the cited art. However, further consideration is respectfully requested based upon the claims as amended and the following discussion.

By this paper, claims 1, 15, and 26 have been amended with added structure, as indicated in the interview. Claims 29 and 31 have been amended to provide consistency with the amendments to claim 26. Claims 34 and 35 have been added as dependent claims to claim 1 to more distinctly point out the subject matter Applicants regard as their invention. In view of these amendments and the following remarks, reconsideration and allowance of claims 1-13, 15-24, and 26-33, and allowance of new claims 34 and 35, are respectfully requested.

REJECTION OF CLAIMS 1-13, 15-24, AND 26-33 UNDER 35 U.S.C. §103(a)

The Examiner rejected claims 1-13, 15-24, and 26-33 under 35 U.S.C. §103(a) as being unpatentable over Hardig in view of Mramor. "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." *MPEP* §2143.03. Applicants respectfully assert that the rejected claims, as amended by this paper, contain limitations not found in either Hardig or Mramor, and are thus nonobvious.

More precisely, as amended, claim 1 recites “the first stiffening element has an elongated shape oriented substantially parallel to the inflatable portion to reduce flexure of the portion of the peripheral region during deployment.” The stiffening element recited by claim 1 is not simply an arbitrary structure, but has a construction that limits flexure of the adjoining portion of the peripheral region. The language added to claim 1 includes both structural and functional components. The shape and orientation of the first stiffening element are structural, and the language regarding reduction of flexure may be termed functional language. Such language, to the extent that it limits the structure recited, is a meaningful limitation that must be considered.

More precisely, MPEP §2114 reads as follows: “While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function.” A functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. *MPEP 2173.05(g)*. See, for example, *Wright Med. Tech., Inc. v. Osteonics Corp.*, 122 F.3d 1440, 1443-44, 43 USPQ2d 1837, 18840 (Fed. Cir. 1997) for one example of a decision in which functional language was analyzed as a claim limitation.

The language added to claim 1 is not a statement of intended use, but is rather a limitation that would be understood by one of skill in the art as defining the geometry, orientation, construction, and/or position of the first stiffening element in a manner that permits it to perform the cited function. Accordingly, such language cannot be ignored in comparing the claim to the prior art. In the Office Action, the Examiner indicated that Hardig discloses non-inflatable segments and/or stiffening elements, citing column 6, lines 48-57. The cited passage does refer to “non-inflatable segments 40.” However, Applicants are unable to find any reference to a stiffener in Hardig.

Rather, it appears that the non-inflatable segments 40 are defined via the inclusion of stitching in the inflatable curtain structure 30. This inference is supported by the text at column 5, lines 13-35. Such stitching need not have any significant stiffening effect, but simply joins the impact surface 44 with the rear surface 46, as indicated at column 5, lines 28-33. In the Abstract, Hardig does indicate that the gas receiving elements 50 help to tension the inflatable curtain structure 30. However, this

appears to be necessary only due to the fact that the non-inflatable segments 40 would otherwise be too flexible to stay in place.

Accordingly, Hardig does not disclose a “first stiffening element,” and especially does not disclose such a stiffening element that is able to “reduce flexure of the portion of the peripheral region during deployment.” The stitching used to form the non-inflatable segments 40 cannot be a stiffening element, as recited in claim 1, because the inflatable segments 40 actually decrease the stiffness of the inflatable curtain structure 30. The gas receiving elements 50 are needed to mitigate the added flexibility. The gas receiving elements 50 are not “oriented substantially parallel to the inflatable portion,” and therefore are also incapable of meeting the “stiffening element” limitation of claim 1.

Furthermore, as amended, claim 1 recites “thereby increasing uniformity of inflation time of the inflatable portion along the length.” This language is also cast in functional terms, but like the language discussed previously, limits the geometry, orientation, construction, and/or position of the first stiffening element in a manner that would be perceived by one of skill in the art with the aid of Applicants’ disclosure. This limitation of claim 1 is supported by Applicants’ disclosure at page 16, lines 7-21. Hardig indicates that the non-inflatable segments 40 expedite inflation of the inflatable curtain structure 30. However, *uniformity* of inflation time is not discussed. A cushion can clearly inflate rapidly without inflating uniformly along its length. Accordingly, this limitation of claim 1 also is not disclosed by Hardig.

Claim 15, as amended, recites “the first stiffening element has an elongated shape oriented substantially parallel to the inflatable portion to make the portion of the peripheral region more resistant to flexure than the inflatable portion.” For the reasons set forth in connection with claim 1, neither the stitches that form the inflatable segments 40, nor the gas receiving elements 50 of Hardig resist flexure of a peripheral region and are oriented substantially parallel to an inflatable portion. Thus, claim 15 also contains limitations not found in the cited art.

Claim 26, as amended, recites “a first stiffening element attached exclusively and directly to at least a portion of the upper part via stitching to enhance inflation of the inflatable portion.” This language contains a variety of structural limitations not disclosed by Hardig. For example, Hardig

does not appear to disclose any separate element attached to an upper part of the inflatable curtain structure 30 by stitching. The stitching that defines the non-inflatable segments 40 does not appear to be used to attach any separate element to the inflatable curtain structure 30. Rather, as mentioned previously, the stitching simply joins the impact surface 44 with the rear surface 46.

The language "attached exclusively . . . to at least a portion of the upper part" will be understood as meaning that the first stiffening element is not attached to any other part, such as a vehicle surface, a lower portion of the curtain, or the like. This language is supported by Figure 1 and the accompanying text of Applicants' disclosure at page 12, lines 3-13. This limitation would also have to be met by at least one of any combination of references alleged to obviate claim 26.

Claims 1, 15, and 26 are not obvious over Hardig and Mramor because they include limitations not present in either cited reference. Furthermore, even if all the elements of any of Applicants' claims could somehow be found in Hardig and Mramor, or in some other combination of references, some motivation to combine the references would have to be shown in order to properly combine the references:

As discussed in *MPEP* §2143.01, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine reference teachings. The Federal Circuit has produced a number of decisions overturning obviousness rejections due to a lack of suggestion in the prior art of the desirability of combining references, as discussed in the aforementioned section.

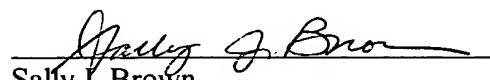
MPEP §2145(X)(C). For the reasons set forth above, claims 1, 15, and 26, as amended, are believed to be nonobvious over the combination of Hardig and Mramor. Claims 2-13, 16-24, and 27-33 depend from claims 1, 15, and 26, respectively, and are therefore nonobvious for the same reasons. Claims 34 and 35, as added by this paper, depend from claim 1 and are nonobvious for the reasons expressed in connection with claim 1. Withdrawal of the rejection under 35 U.S.C. §103(a) over Hardig in view of Mramor is respectfully requested.

Appl. No. 10/050,511
Amdt. dated March 3, 2004
Reply to Office Action of November 12, 2003

CONCLUSION

In view of the foregoing remarks, Applicants submit that claims 1-13, 15-24, and 26-35 are in a condition for allowance. If there are any remaining issues preventing allowance of the pending claims, the Examiner is requested to contact the undersigned.

Respectfully submitted,



Sally J. Brown
Reg. No. 37,788
Attorney for Applicants

Date: 3/3/04

Autoliv ASP, Inc.
3350 Airport Road
Ogden, Utah 84405
Telephone: (801) 625-4800